

March 30, 1993

Alaskan Copper and Brass
P.O. Box 3546
Seattle WA 98134

Attn: Gerald Thompson

Dear Mr. Thompson:

Subject: Your Request of March 12, 1993 - PO #M-28068

Two 96-hour static acute rainbow trout (*Oncorhynchus mykiss*) bioassays were conducted on waste samples submitted to the Aquatic Toxicology Laboratory on March 12, 1993 for hazardous waste designation. The bioassay procedure used for these tests followed guidelines established by the Washington State Department of Ecology (WDOE 80-12, June 1991) "Static Acute Fish Toxicity Tests." This procedure was applied to your samples to determine designation under the Washington State Dangerous Waste Regulation (WAC 173-303).

The samples were retested at your request following previous bioassay failures. The two samples tested were: 1) M-28068A - WEST PLASMA SLUDGE and 2) M-28068A - BAGHOUSE FILTER DUST. New samples were removed from the waste containers for these tests, so they are not identical to the samples previously tested. The WEST PLASMA SLUDGE sample contained more water than the previous sample submitted.


The fish bioassays were completed in triplicate concentrations of 100 and 1000 ppm sample with ten fish in each replicate. Testing resulted in significant mortality in both samples. The mortalities and designation of these wastes under WDOE bioassay criteria are summarized in the table below.

	Sample	Mortality 100 ppm	Mortality 1000 ppm	Waste Category
1)	M-28068A - West Plasma Sludge	12/30	28/30	Extremely Hazardous
2)	M-28068A - Baghouse Filter Dust	2/30	25/30	Dangerous

Gerald Thompson
March 30, 1993
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The waste designations for these two samples are different from the results of the previous tests. This may be due to the differences in sampling methods, and the sample holding times between the two sets of samples. I have enclosed the Aquatic Toxicology Laboratory data sheet, chain of custody form and chemical analyses. Please contact me at 924-6455 if you have any questions.

Sincerely,

A handwritten signature in cursive script, appearing to read "Stephen Moon".

Stephen Moon
Environmental Technician
Weyerhaeuser Technology Center
Tacoma, Washington 98477

WTC/SM:pd/481.DOC

Enclosure



Weyerhaeuser

Environmental Sciences & Technology

Aquatic Toxicology Laboratory

Data Sheet for Static Acute Fish Bioassay Toxicity Test

Sample Originator Alaska Cn & Brass
 Address TACOMA
 Collector Gerald Thompson
 Date Sample Collected 3/12/93

Beginning Date 3/15/93
 Ending Date 3/19/93
 Test Organism Rainbow Trout
 Required Test Temperature Range 12°C ± 1°C

Time 1500
 Time 1500
 Analyst CB, SM, PC
 Test Method DOE 80-12

Sample Reference Number/Name	Test Container No.	Conc. (mg/l) ppm	Number of Cumulative Deaths					Dissolved Oxygen (mg/l)					pH 25 C					Temperature (C)					Total Alkalinity (mg/l as CaCO ₃)		Total Hardness (mg/l as CaCO ₃)		Conductivity uMHOS/cm	
			0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	0	24	0	24
BAG HOUSE	A	100	0	0	0	0	0	9.9	8.6	7.6	7.7	7.4	7.7	7.7	7.7	7.8	12	12	12	12	12	108		96		181		
Filter dust	B		0	0	0	0	1	10.0	8.7	8.0	7.9	7.8	7.7	7.8	7.8	7.7	7.8	12								181		
M28068A	C		0	0	0	0	1	9.9	8.4	7.9	7.7	7.5	7.7	7.7	7.8	7.7	7.8	12	✓	✓	✓	✓				181		
3/12/93 e 1345	A	1000	0	0	0	6	6	10.1	8.5	8.1	8.3	8.5	7.8	7.8	7.8	7.8	7.9	12	12	12	12	12	100		92	182		
	B		0	0	1	6	9	10.2	8.4	7.6	7.8	8.2	7.8	7.7	7.8	7.8	7.9	12								182		
	C		0	0	4	7	10	10.1	8.3	8.0	8.3	8.4	7.7	7.7	7.8	7.8	7.9	12	✓	✓	✓	✓				182		
WEST PLASMA	A	100	0	0	3	5	5	10.2	8.4	7.6	7.7	7.7	8.0	7.8	7.8	7.7	7.8	12	12	12	12	12	104		84	181		
SLUDGE	B		0	0	0	2	3	10.3	8.7	8.0	7.6	7.6	8.0	7.8	7.8	7.7	7.9	12								181		
M28068A	C		0	0	2	3	4	10.3	8.4	7.5	7.5	7.4	7.9	7.8	7.8	7.7	7.8	12	✓	✓	✓	✓				181		
3/12/93 e 1345	A	1000	0	0	3	5	9	10.4	8.6	8.4	8.4	8.3	8.0	7.9	7.9	7.8	7.9	12	12	12	12	12	108		100	181		
	B		0	0	3	8	9	10.3	8.7	8.4	8.4	8.3	8.0	7.9	7.9	7.9	8.0	12								181		
	C		0	0	2	10	—	10.3	8.5	8.1	7.6	—	8.0	7.9	7.9	7.8	—	12	✓	✓	✓	—				181		
CONTROL	A		0	0	0	0	0	9.8	8.2	7.6	7.6	7.5	7.9	7.7	7.7	7.6	7.7	12	12	12	12	12				178		
	B		0	0	0	0	0	10.0	8.5	8.2	8.0	8.0	8.0	7.8	7.8	7.7	7.8	12										
	C		0	0	0	0	0	10.1	8.9	8.5	8.3	8.3	8.0	7.9	7.8	7.7	7.8	12	✓	✓	✓	✓						

Sample Description(s) M28068A = Fine dust material M28068A = Dark colored sludge liquid

Average Weight 0.31 gms Mean Length 33 mm Longest 36 mm Shortest 30 mm Ratio (long/short)

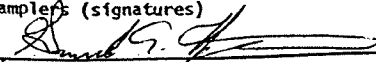
Number of organisms per chamber 10 Test organism loading density 0.31 gms/L

Comments Fish age = 39 days

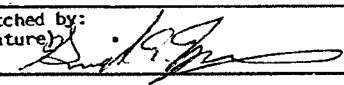
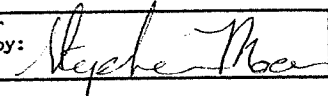
Data Verified By Carl Beckman Date 3/30/93

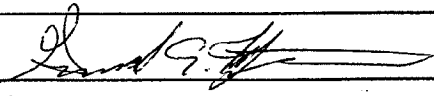
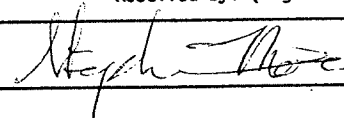
✓ EHW > 10/30 ✓ DW > 11/30
 West Plasma Sludge Bag House Filter dust

CHAIN OF CUSTODY RECORD

PROJECT NUMBER M 1218 TO 16.1 18	TASK 1	Sampler's (signatures) 
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Sample Designation	Lab Code	Collection		Analyses Required
		Time	Date	
West Plasma Sludge M28068A		1:45 pm	3/12/93	Fish Bio
Baghouse (Filter dust) M28068A		1:45 pm	3/12/93	Fish Bio

Method of Shipment					
Dispatched by: (signature) 	Time 2:00	Date 3/12/93	Received for Laboratory by: (signature) 	Time 2:40	Date 3/12/93
Comments					

Relinquished by: (signature) 	Received by: (signature) 	Time 14:40	Date 3/12/93
Comments			
Comments			
Comments			
Comments			

RECORD BOOK

PAGE NUMBER



ORIGINAL

Corporate Headquarters
Tacoma, Washington 98477
Tel (206) 924 2345

INVOICE
DATE 05-Apr-92 NUMBER RD 4-2

Sold to:

Alaskan Copper and Brass
Attn: Gerald Thompson
P.O. Box 3546
Seattle, WA. 98134

Remit to:
WEYERHAEUSER COMPANY
R&D Financial Services
WTC 1H22

Terms: Net 30

Customer Auth. #

P/O #M-28068

EXPLANATION OF CHARGES:

To Invoice you for:

Two (2) Fish Bioassays

\$1,200.00

OK TO PAY
J Brown

Total

\$1,200.00

Our sales representative:
Maureen E. Collins

Account dist.
1599-92-0441-044-1103

NOTICE: A late payment charge of 1 3/4% per month on the unpaid balance will be made on all past due accounts.



AKC-0013695



Corporate Headquarters
Tacoma, Washington 98477
Tel (206) 924 2345

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DATE	NUMBER
05-Apr-92	RD 4-2

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